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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,627	02/13/2004	Fabrizio Fabbri	FABBRI4	5356

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EXAMINER	
BERTHEAUD, PETER JOHN	
ART UNIT	PAPER NUMBER
3746	
MAIL DATE	DELIVERY MODE
09/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,627	FABBRI, FABRIZIO	
	Examiner	Art Unit	
	PETER J. BERTHEAUD	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 February 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/21/2008 has been entered. It is noted that claims 7 and 8 have been amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2-4, and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redman 3,427,988 in view of Elliott. 4,618,316.

Redman discloses a plunger pump comprising at least two in-line cylinders 19 (see col. 1, lines 56-58), each cylinder 19 having a plunger 12 and is connected via a conduit (see conduit formed inside elements 26 and 27) and intake valves 30 to an intake manifold (see 22) and to a delivery manifold (see 23), said cylinders 19 being provided with a dead ended compartment (compartment formed by elements 26, 27, and 22) that receive the intake valves 30, said conduits and said manifolds, wherein the

intake manifold (see 22) is positioned in front of the line of cylinders 19 and is in direct communication with the cylinders 19 via a conduit (see conduit inside block 27) connected to the dead ended compartment provided as an extension of the corresponding cylinder 19, having a diameter smaller than that of the cylinder diameter (again, see conduit inside block 27 compared to cylinder 19), and in which the intake valve 30 is located and retained in position by a deformable element 32, against a portion of said block (27), and wherein the intake manifold and the delivery manifold are connected by at least a delivery conduit 20 having a diameter smaller than the diameter of the housing (see 28 and 29) of the delivery valve 31. Redman futher discloses that the intake manifold (see 22) has its axis coplanar with the cylinder 19 axes. Redman also discloses that the compartment containing the intake valve 30 is cylindrical and coaxial with the respective cylinder 19 (see configuration in Fig. 1). However, Redman does not teach the following claimed limitations taught by Elliott.

Elliott teaches a reciprocating pump assembly including a plunger 16, an inlet manifold 22, a delivery manifold 26, as well as conduits and valves 36, 52 for both. Elliot further teaches a plunger seat (see cylinder 30) and that the cylinder 30 is provided within a single block 20 together with said seat, said conduits, and said manifolds (see Fig. 1) and that cylinder 30 communicates with the compartment containing the delivery valve via two parallel conduits (see 58, Fig. 3, and col.4, lines 32-36). Elliott teaches that these aspects of the invention would be advantageous because only one closure member 76 is needed to secure and tighten the valve assemblies, and because the separator of the two parallel conduits provides a seat 58 for the valve 52.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the plunger pump assembly of Redman by providing the in-line cylinders together said conduits, and said manifolds within a single block and by having two parallel conduits communicate with the delivery valve, as taught by Elliott, in order to decrease the amount of closure members needed to seal the pump (see col.4, lines 52-60) as well as provide the delivery valve with a valve seat 58.

4. Claims 5, 6, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redman 3,427,988 in view of Elliott 4,618,316, and in further view of Hagler 3,306,214.

Redman in view of Elliott disclose the invention as discussed above. However, Redman in view of Elliott do not disclose that the deformable means are the actual valve seat sealing gaskets or that the deformable means is an elastic plate.

Hagler teaches a pressure control apparatus including a plunger 17 contained within a cylinder, an inlet check valve 24, and a deformable means 19. Hagler further teaches that the deformable element is the valve seat sealing gasket (see col. 1, lines 63-68) and that the deformable element is an elastic plate. Hagler teaches that these aspects of the invention would be advantageous because they make the pump capable of delivering a liquid under rapidly and widely varying pressure and flow.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the pump assembly of Redman and Elliott by making the deformable means a sealing gasket or an elastic plate, as taught by Hagler, in order to deliver a liquid under rapidly and widely varying pressure and flow (see col.1, lines 14-22).

Response to Arguments

5. Applicant's arguments filed 6/20/2008 have been fully considered but they are not persuasive.

6. In response to Applicant's arguments with respect to the delivery conduit: Applicant argues that "*there is no suggestion in Redman of resolving the second problem in the way provided by the claimed invention namely by means of at least a delivery conduit 80 having a diameter smaller than the diameter of the cylinder.*" Examiner respectfully disagrees due to Applicant arguing more than is claimed. The limitation in question is in claim 8 and states "*wherein the intake manifold and the delivery manifold are connected by at least a delivery conduit having a diameter smaller than the diameter of the housing of the delivery valve.*" This is indeed the case in Redman. The diameter of the housing of the delivery valve, which is comprised of elements 28 and 29, is most certainly larger than the diameter of the delivery conduit 20. The limitation that is being argued by the Applicant, a delivery conduit 80 having a diameter smaller than the diameter of the cylinder, is not claimed. Thus, Redman reads on the limitation in question.

7. In response to Applicant's arguments with respect to Elliott: Applicant argues that "*numeral 30 is not the plunger seat but only a chamber that corresponds to the final part of the excursion of the plunger. Elliott defines the plunger seat as cylinder 14 (see column 3, line 1) and this element is not in the single block as claimed, but in another block.*" Examiner respectfully disagrees. It is certainly reasonable to consider numeral 30 in Elliott a plunger seat because it is indeed an area onto which the plunger is seated

and because Applicant has not disclosed or claimed any specific details as to what differentiates the plunger seat in the application from that of Elliot. Thus the combination of Redman in view of Elliott reads on the claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J. BERTHEAUD whose telephone number is (571)272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit 3746

PJB

/Peter J Bertheaud/
Examiner, Art Unit 3746